

**PUBLIC NOTICE OF PROPOSED REQUEST FOR U.S. EPA ACTION REGARDING ELEVEN AQUIFERS
HISTORICALLY TREATED AS EXEMPT:**

The Pico Formation underlying the boundaries of the South Tapo Canyon Field

The Tumey Formation underlying the boundaries of the Blackwell's Corner Field

The Kern River Formation underlying the boundaries of the Kern Bluff Field

All aquifers underlying the boundaries of the Bunker Gas Field that are not in a hydrocarbon-producing zone

The Santa Margarita Formation underlying the boundaries of the Kern River Field

The Chanac Formation underlying the boundaries of the Kern River Field

The Walker Formation underlying the boundaries of the Mount Poso Field

The Olcese Formation underlying the boundaries of the Round Mountain Field

All aquifers underlying the boundaries of the Wild Goose Field that are not in a hydrocarbon-producing zone

The Walker Formation underlying the boundaries of the Round Mountain Field

The Santa Margarita Formation underlying the boundaries of the Kern Front Field

30-DAY PUBLIC COMMENT PERIOD

Notice Published 

NOTICE IS HEREBY GIVEN that the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources ("Division"), in consultation with the State Water Resources Control Board ("Water Board") (collectively, "State Agencies"), is proposing to advise the United States Environmental Protection Agency ("US EPA") that nine of the eleven aquifers historically treated as exempt do not appear to meet the federal regulatory criteria for exemption from the federal Safe Drinking Water Act ("SDWA"). Accordingly, the State Agencies propose to request that US EPA exercise its authority under the SDWA to clarify that these nine aquifers are not exempt aquifers.

In addition, the State Agencies are proposing to advise US EPA that the two other aquifers historically treated as exempt – the Walker Formation underlying the Round Mountain Field and the Santa Margarita Formation underlying the Kern Front Field – are currently the subject of aquifer exemption proposals. The proposal for the Walker Formation has been finalized and published for public comment (but not yet submitted to US EPA), while the proposal for the Santa Margarita Formation is still in early development. Portions of these aquifers are (or will be) included in the exemption proposals, while other portions are not (or will not be) included. The State Agencies therefore propose to request that US EPA take action to clarify that these two additional aquifers are *not* exempt, except with respect to any portion(s) that US EPA approves for exemption as a result of a future exemption proposal.

WRITTEN COMMENT PERIOD AND PUBLIC COMMENT HEARING

Any person, or his or her authorized representative, may submit to the Department of Conservation ("Department") written statements, arguments, or comments relevant to the proposed action. Comments may be submitted by email to comments@conservation.ca.gov, by facsimile (fax) to (916) 324-0948, or by mail to:

Department of Conservation
801 K Street, MS 24-02
Sacramento, CA 95814
ATTN: Eleven Aquifers

The written comment period closes at 5 p.m. on [REDACTED], 2016. The Department will not consider any comments received at the Department's offices after that time.

Additionally, any interested person, or their authorized representative, may present, either orally or in writing, comments regarding the proposed action at the public hearing, to be held at the following time and place:

[REDACTED], 2016 [REDACTED]

Services, such as translation between English and other languages, may be provided upon request. To ensure availability of these services, please make your request no later than ten working days prior to the hearing by calling the staff person identified in this notice.

Servicios, como traducción de Inglés a otros idiomas, pueden hacerse disponibles si usted los pide en avance. Para asegurar la disponibilidad de éstos servicios, por favor haga su petición al mínimo de diez días laborables antes de la reunión, llamando a la persona del personal mencionada en este aviso.

BACKGROUND

The Division regulates the underground injection of fluids associated with oil and gas production ("Class II injection") through an underground injection control ("UIC") program approved by US EPA pursuant to the federal SDWA. The SDWA requires the protection of underground sources of drinking water ("USDWs"), which are defined broadly in federal regulation as including any aquifer that supplies or contains a sufficient quantity of groundwater to supply a public water system and that has a total dissolved solids ("TDS") composition of less than 10,000 mg/l. (See 40 C.F.R. § 144.3.)

Under federal law, an aquifer, or a portion of an aquifer, that would otherwise qualify as a USDW may be "exempted" from protection as a USDW, however, if it meets specific exemption criteria enumerated in federal regulation and undergoes an exemption process that involves both the State and US EPA. (See 40 C.F.R., §§ 146.4, 144.7.) Specifically, a USDW may be exempted for purposes of Class II injection if it meets the following criteria:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a source of drinking water because:
 - (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated

by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.

(2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;

(3) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

(c) The TDS content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

(40 C.F.R. § 146.4.). Exempted aquifers may be designated by the State and submitted to US EPA for review and possible approval. No aquifer exemption is valid unless and until it is approved by US EPA. (See 40 C.F.R. § 144.7.)

When US EPA approved the State's UIC program in 1983, the Division and US EPA entered a Memorandum of Agreement ("Primacy MOA") that identified the aquifers for which US EPA granted aquifer exemptions. Unfortunately, however, there exist two competing versions of the Primacy MOA, each with the same signature page and dates, which differ with respect to the non-hydrocarbon-producing aquifers US EPA agreed to exempt. One version purports to deny exemptions for eleven non-hydrocarbon-producing aquifers, while the second version purports to approve exemptions for those same aquifers. The Division and US EPA have historically treated these eleven aquifers as exempt. Following a US EPA audit of the State's UIC program in 2012, US EPA determined that these eleven aquifers may not actually be exempt, and ordered the State to reevaluate the aquifers to ascertain whether the aquifers meet the federal exemption criteria and whether the aquifers are appropriate for ongoing injection of fluid associated with oil and gas production. Additionally, US EPA prescribed detailed corrective actions to bring the State's UIC program into compliance with the SDWA. One of the corrective actions requires the State to prohibit injection into the eleven aquifers "historically treated as exempt" by December 31, 2016 absent a US EPA determination that the aquifer(s) meet the regulatory criteria for exemption. The Division has implemented this and other compliance dates in its Aquifer Exemption Compliance Schedule Regulations. (Cal. Code Regs., tit. 14, § 1779.1.)

DETAILS OF THE PROPOSED REQUEST FOR U.S. EPA ACTION

Nine Aquifers Have Not Been Shown to Meet Exemption Criteria

Based on the available information, the State Agencies' current assessment is that nine of the eleven aquifers do not meet the federal regulatory criteria for exemption from the SDWA. As detailed below, these aquifers are relatively shallow non-hydrocarbon-producing aquifers, and eight of the nine contain groundwater with less than 3,000 mg/l TDS. At this time, the State Agencies lack substantial evidence to find that these aquifers cannot now and will not in the future serve as a source of drinking water. The nine aquifers are:

- The Pico Formation underlying the boundaries of the South Tapo Canyon Field.
Injection wells: 0 TDS: 1,900 NaCl Depth: 0-1,000'

- The Tumey Formation underlying the boundaries of the Blackwell's Corner Field.
Injection wells: 0 TDS: 2,100-2,600 mg/l Depth: 945'-1,473'
- The Kern River Formation underlying the boundaries of the Kern Bluff Field.
Injection wells: 0 TDS: 400-900 mg/l Depth: 0-200'
- All aquifers underlying the boundaries of the Bunker Gas Field that are not in a hydrocarbon-producing zone.
Injection wells: 0 TDS: 1,215 mg/l Depth: 3,000'
- The Santa Margarita Formation underlying the boundaries of the Kern River Field.
Injection wells: 32 TDS: 490-1,584 mg/l Depth: 760'-2,285'
- The Chanac Formation underlying the boundaries of the Kern River Field.
Injection wells: 12 TDS: 926-3,325 mg/l Depth: 425-1,335'
- The Walker Formation underlying the boundaries of the Mount Poso Field.
Injection wells: 5 TDS: 1,069 mg/l Depth: 1,740'-1,796'
- The Olcese Formation underlying the boundaries of the Round Mountain Field.
Injection wells: 6 TDS: 2,693 mg/l Depth: 710'-850'
- All aquifers underlying the boundaries of the Wild Goose Field that are not in a hydrocarbon-producing zone.
Injection wells: 0 TDS: 2,800-5,000 mg/l¹ Depth: 2,700'-3,400'

The State Agencies' current assessment of these nine aquifers, and the proposed request to US EPA, would not preclude future consideration of exemption proposals. If the State Agencies in the future receive new information establishing that any of these aquifers, or portions thereof, meet the exemption criteria and are appropriate for injection, the State Agencies may elect to submit an aquifer exemption proposal to US EPA following the required legal procedure, including public notice and a public hearing.

Portions of Two Aquifers May Qualify for Exemption

Two of the eleven aquifers historically treated as exempt are being considered for exemption. Those

¹ A more recent sample of groundwater underlying the Wild Goose Field indicates a TDS composition of 24,349 mg/l. Aquifers consisting of groundwater with greater than 10,000 mg/l TDS are not USDWs and do not require aquifer exemptions as a prerequisite to Class II injection. Here, however, the more recent sample contradicts historic data and may not be reflective of all non-hydrocarbon-producing zones underlying the Wild Goose Field. An exemption would be needed to the extent TDS levels are below 10,000 mg/l in other aquifers or areas underlying the Field, yet the State Agencies have received no evidence to support an exemption or a more conclusive and complete characterization of the current water quality. The State Agencies therefore propose to request US EPA action to clarify that all non-hydrocarbon-producing aquifers underlying the Wild Goose Field are not exempt aquifers, notwithstanding the possibility that some portions of such aquifers may in the future be confirmed to be outside the purview of the SDWA.

aquifers (or portions thereof) are:

- The Walker Formation underlying the boundaries of the Round Mountain Field.
Injection wells: 30 TDS: 2,335 mg/l Depth: 1,890'-2,590'
- The Santa Margarita Formation underlying the boundaries of the Kern Front Field.
Injection wells: 13 TDS: 460-2,318 mg/l Depth: 2,197'-2,840'

An exemption proposal for the Walker Formation underlying the Round Mountain Field has been finalized and the Division is currently accepting public comments on the proposal.² The proposal for the Santa Margarita Formation underlying the Kern Front Field is still in early development, and the State Agencies are currently considering information intended to show that portions of the Formation meet the exemption criteria. Only those portions of the Walker and Santa Margarita formations that are both included in the State Agencies' exemption proposal and approved for exemption by US EPA should be confirmed as exempt. The omission of any portion(s) of the formations from a final exemption proposal would be due to the State Agencies lacking evidence to find that such portion(s) are eligible for exemption. Accordingly, the State Agencies propose to request that US EPA clarify that the Walker Formation underlying the Round Mountain Field and the Santa Margarita Formation underlying the Kern Front Field are not exempt, except with respect to any portions of the formations that US EPA approves for exemption as a result of a future exemption proposal submitted to US EPA.

RESPONSE TO COMMENTS

The Department will review and respond to all timely and relevant comments received (including oral comments received at the hearing) following the written comment period and public hearing. Thereafter, the Department may proceed with the proposed request that US EPA take action with respect to the eleven aquifers, or some smaller subset of the eleven aquifers.

CONTACT PERSON

Inquiries concerning the proposed action may be directed to:

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801 K Street, MS 24-02
Sacramento, CA 95814
Phone: (916) 322-3080
Email: Comments@conservation.ca.gov

² The proposal and supporting materials for the Round Mountain Field exemption are available at http://www.conservation.ca.gov/dog/Pages/Aquifer_Exemptions.aspx.